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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/006,461	12/06/2001	Cathryn E. Goodman	CM014971(72458)	3518

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EXAMINER

BALI, VIKKRAM

ART UNIT PAPER NUMBER

2623

DATE MAILED: 11/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/006,461	Applicant(s) GOODMAN ET AL.	
	Examiner Vikkram Bali	Art Unit 2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days **will** be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 June 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 38 and 39 is/are allowed.
- 6) ☒ Claim(s) 1-14, 17-33, 36, 37, 40-45 and 49-51 is/are rejected.
- 7) ☒ Claim(s) 15, 16, 34, 35 and 46-48 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/9/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. In view of the appeal brief filed on 6/21/2004, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

Claim Objections

2. Claims 19-24 are objected to because of the following informalities: claims 19-24 calls for a "memory device" whereas the independent claim calls for a "device". Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 25-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Cranston et al (US 4902857).

With respect to claims 25-27, Cranston discloses a cured epoxy with discrete conductive elements substantially resistance to current flow and partially exposed on either side of cured epoxy, (see figure 1, a cured epoxy with the conductive elements 12, 14 and 20, are partially exposed on either side of the cured epoxy) as claimed. The elements are conductive spheres of nickel oxide, (see col. 3, lines 21-23) as claimed.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-10, 32-33, 36-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shigematsu (EP 1018695).

With respect to claim 1, Shigematsu discloses the fingerprint sensor that includes a cell (see figure 1A), a fingerprint contact surface coplanar to the memory (see figure 1A, numerical 102a, the contact), conductive paths (see figure 3, 112, is the connections between the electrical devices thereby making them conductive paths), conductive paths are substantially directly conductive coupled to the electrical devices (see the figure 3 and 14 the entire surface of the sensor is coupled to each other i.e. all the electrical devices are coupled with the conductive paths, and the connection between the sensor circuit [102] with the memory [103], see figure 14 through a register [105] "substantially directly coupled") as claimed. He fails to explicitly disclose the memory cells. But, the figure 1A numerical 103 teaches a memory that is included in the cell. Therefore, one ordinary skilled in the art at the time of invention can simply

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makes the memory as present in every cell of the Shigematsu as a memory cells as taught, thereby making the fingerprint sensor as a huge memory to store the fingerprint of the person.

With respect to claim 2, Shigematsu further discloses the solid-state memory, (see the figure 1A, the fingerprint sensory is a integrated circuit i.e. solid state memory) as claimed.

With respect to claims 3 and 4, the random access memory and the static random access memory are well known in the art of memory to by use in storing the data. Therefore, it have been obvious to one ordinary skilled in the art at the time of invention to simply use the well known features of random access memory and the static random access memory to store the data.

With respect to claim 5, Shigematsu further discloses the charge storage device, (See figure 1A, numerical 102a) as claimed.

With respect to claims 6-9, Shigematsu further discloses memory includes plurality of conductive surfaces, conductive surfaces are each electrically coupled to a corresponding electrical devices, common rail, (see figure 16, each cell is connected to the corresponding cell, thereby, making the components in each cell connected to each other) as claimed.

With respect to claim 10, Shigematsu further discloses the surface comprises an epoxy material, (see col. 7, lines 32-34) as claimed.

Claim 32 is rejected for the same reasons as set forth in the rejection of claim 1, as claim 32 is the method claim for the fingerprint device for the claim 1. Furthermore, Shigematsu discloses placing an object on to the contact surface and sensing and storing in the memory the information regarding the asperities by discharging the electrical device, (see col. 6, [0021], fingerprint sensor sensing fingerprint and storing in the memory) as claimed.

Claim 33 is rejected for the same reasons as set forth in the rejection of claim 5, as claim 33 is the method claim for the fingerprint device for the claim 5.

With respect to claim 36, the dissipation of the electrostatic discharge is well known in the art of fingerprint sensor. Therefore, it have been obvious to one ordinary skilled in the art at the time of invention to simply use the well known features of dissipating electrostatic discharge build in the finger before taking the fingerprint in order to secure the sensor.

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With respect to claim 37, Shigematsu further discloses comparing the tactile impressions information with the reference (see the figure 1A, the 104, and col. 5, lines 49-55) as claimed.

Claims 44 and 45 are rejected for the same reasons as set forth in the rejection of claims 32 and 33, because claims 44 and 45 are claiming subject matter as claims 32 and 33.

Claim 49 is rejected for the same reasons as set forth in the rejection of claim 1, as claim 49 is claiming similar subject matter as claim 1.

Claim 50 is rejected for the same reasons as set forth in the rejection of claim 1, as claim 50 is claiming similar subject matter as claim 1. However, Shigematsu fails to disclose the enabled and disabled states as the function. But, is well known in the field of fingerprint sensor to have the fingerprint sensor "mechanism" be able to detect a finger and thereby enabling the sensor to obtain the fingerprint and disabling the sensor once the finger is removed or off the sensor. Therefore, it would have been obvious to one ordinary skilled in the art at the time of invention to simply use the well known feature of the enabling and disabling of the sensor "mechanism" in order to secure and safe guard the sensor "mechanism".

With respect to claim 51, it is well known in the security field to have enable and disable feature in projectile weapon, a barrier operator, a communications device a smart card and a computer. Therefore, it have been obvious to one ordinary skilled in the art at the time of invention to simply use the well known features of enabling and disabling feature in to the mechanism to secure the mechanism.

4. Claims 11-13 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shigematsu (EP 1018695) in view of Cranston et al (US 4902857).

With respect to claim 11, Shigematsu discloses the invention substantially as discloses and as described in claim 10. However, he fails to disclose the conductive paths are comprised of conductive spheres, as claimed. Cranston teaches an anisotropic conductivity device with conductive paths are comprised of conductive spheres, (see figure 1, 20 and col. 3, lines 21-23, and they are typically nickel as claimed in claim 13) as claimed. It would have been obvious to one ordinary skilled in the art at the time of invention to combine the two references. The structure disclose by Shigematsu is a polymer interconnect structure (see figure 6) and the teachings of Cranston of having the spheres conductive path can be introduce in to the Shigenatsu's system thereby making the polymer structure capable of providing a reliable bond (see col. 2, lines 21-23 of Cranston, for motivation).

With respect to claim 12, the substantial resistance to the current flow is well known in the art of capacitance measuring. Therefore, it have been obvious to one

ordinary skilled in the art at the time of invention to simply use the well known features of capacitance measuring such as having a capacitor to measuring the finger capacitance in order to get the fingerprint.

With respect to claim 17, the measurement of the contact is design choice as per the size of the sensor, i.e. if one would like to make a bigger fingerprint sensor he/she can use a bigger size of the conductive spheres and if a person would like to make a small fingerprint sensor he/she can use a smaller size of the conductive spheres.

Claim 18 is rejected as for the same reasons as set forth in the rejection of claim 11, because claim 18 is a device claiming subject matter as claimed in claim 11. Furthermore, the conductive pads disclose by Shigematsu (see figure 1A, 102a), and the cured conductive epoxy is taught by Cranston (see col. 1, lines 5-10).

Claim 19 and 24 is rejected as for the same reasons as set forth in the rejection of claim 1, because the device limitation of claim 19 and 24 is claimed under claim 1.

With respect to claim 20, Shigematsu further discloses the exposed conductive pads, (see col. 6, lines 36-41, wherein the electrode 202 is touch by the finger in order to obtain the fingerprint) as claimed.

Claim 21-23 is rejected as for the same reasons as set forth in the rejection of claim 11-13, because claim 21-23 is a device claiming subject matter as claimed in claim 11-13.

5. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shigematsu (EP 1018695) in view of Cranston et al (US 4902857) as applied to claim 11 above, and further in view of Kato et al (US 4843226).

With respect to claim 14, Shigematsu and Cranston discloses the invention substantially as discloses and as described in claim 11. However, they fail to disclose Conductive spheres physically contacts the memory, as claimed. Kato teaches a semiconductor chips that includes memory and the conductive paths connected to the memory (see figure 1, memory 3-6 and the conductive paths coupled to the memory the dash lines connections). It would have been obvious to one ordinary skilled in the art at the time of invention to combine the references. The system of Shigematsu and Cranston includes the fingerprint sensor as a polymer substrate as epoxy resin that does has the sphere conductive paths and the teachings of Kato to connect the memory to the conductive paths as the epoxy resin can be introduce to the Shigematsu and Cranston system to provide a system where the data could easily be stored in the memory.

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6. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cranston et al (US 4902857).

With respect to claim 28, Cranston discloses the invention substantially as discloses and as described in claim 26. However, he fails to disclose the conductive spheres are about seven millionths of a meter in diameter, as claimed. But, the measurement of the contact is design choice as per the size of the sensor, i.e. if one would like to make a bigger fingerprint sensor he/she can use a bigger size of the conductive spheres and if a person would like to make a small fingerprint sensor he/she can use a smaller size of the conductive spheres.

7. Claims 29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over of Cranston et al (US 4902857) in view of Kato et al (US 4843226).

With respect to claim 29, Cranston discloses the invention substantially as discloses and as described in claim 25. However, he fails to disclose a memory that is physically and electrically coupled to the cured epoxy, as claimed. Kato teaches a semiconductor chips that includes memory and the conductive paths connected to the memory (see figure 1, memory 3-6 and the conductive paths "electrically" coupled to the memory the dash lines connections). It would have been obvious to one ordinary skilled in the art at the time of invention to combine the references. The system of Cranston includes the polymer substrate as epoxy resin that does has the conductive paths and the teachings of Kato to connect the memory to the conductive paths as the epoxy resin

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can be introduced to the Cranston system to provide a system where the data could easily be stored in the memory.

With respect to claim 30 and 31, Kato further teaches the plurality of electrically conductive surfaces that are electrically coupled to memory cells and that physically contact the cured epoxy, (see figure 1, memory 3-6 and the conductive strips 2) as claimed.

Claims 40-43 is rejected for the same reasons as set forth in the rejection of claims 1-14, because claims 40-43 is claiming the subject matter as claimed in the claims 1-14.

Allowable Subject Matter

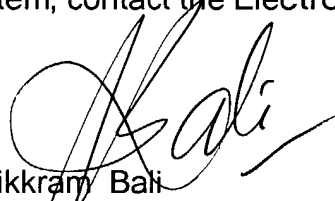
8. Claims 15, 16, 34-35 and 46-48 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. Claims 38 and 39 are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vikkram Bali whose telephone number is 703.305.4510. The examiner can normally be reached on 7:30 AM - 4:00 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on 703.308.6604. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Vikkram Bali
Primary Examiner
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